FORKTAIL 16 (2000): 65-67

Observations of Plain-pouched Hornbills *Aceros subruficollis* in Tasek Temengor, Peninsular Malaysia

HO HUA CHEW and SUTARI SUPARI

Descriptive information is provided in this paper which unequivocally confirms the identity of flights of Plain-pouched Hornbills *Aceros subruficollis* over the Tasek Temengor, in northern Perak, Malaysia. Observations were made over 5 days in September 1998, when feeding flights numbered a maximum of 2067 birds, and roost flights a maximum of 1665 birds. The ratio of blue-pouched to yellow-pouched birds was noted on random birds on four occasions, which indicated that female birds outnumbered male birds by at least 1.14:1.

INTRODUCTION

Over recent years there have been numerous reports of large flights of hornbills across the Tasek Temengor (GR205805) area in northern Perak, Peninsular Malaysia. Tasek Temengor is an artificial lake created by damming the Perak River, which flows from Gunong Ulu Laho (3,900 ft.; GR 425190) in northern Perak, close to the Thai border, to the Straits of Malacca. These reports were either neutral regarding the species observed, or assumed that all the birds were Wreathed Hornbills *Aceros undulatus*, a common species in the forests of the Malay peninsula. The maximum count at Temengor was 2,421 hornbills in a flight on 24 November 1993 (Davison 1995) and 1,227 in a flight in August 1994 (Yaacob 1994). Earlier, in August 1992, Sutari had encountered a flight of 300 hornbills at Tasek Kenering (GR 885475), another artificial lake c. 60 km south of Temengor. This was followed by a count of 764 birds at the same site on 7 September 1993 by the authors (Ho and Sutari 1997). Descriptions and photographs were taken of the Kenering birds in flight, and from these, Dr Pilai Poonswad, who is studying the Plain-pouched Hornbill *Aceros subruficollis* and other hornbills in Thailand, confirmed that the hornbills at Kenering were Plain-pouched Hornbill rather than Wreathed (pers. comm.).

Given the new information that Plain-pouched Hornbills occur along the Perak River, it seemed likely that the Temengor flock, only about 60 km to the north-east, might also be this species. In this paper we provide information that unequivocably confirms that large numbers of this species exist there. In addition we present new data on counts, direction, and timing of flights, and observed behaviour and vocalizations, and discuss conservation implications.

METHODS

To establish the identity of these birds, we revisited this area with five birders from the Nature Society of Singapore. We camped on an island in the Perak River on 6 September 1998, and moved camp to Pos Ciong along Sungei Sara, a tributary of the Perak River, from 7 to 10 September. At Pos Ciong, our observations were made from an open area high above the river. There, large numbers of hornbills of a single species passed directly over our heads each morning and evening for five consecutive days. Our observations ended on 10 September, although the hornbill flights had not stopped. We took field notes, photographs and video/audio recordings of their movements and activities. We never saw Wreathed and Plain-pouched Hornbills together, so there was no opportunity for direct comparisons between the two species. However, we are familiar with the Wreathed from the southern part of Peninsular Malaysia. Our descriptions are based on field notes, supplemented by close study of the photographs and video recordings. Relevant portions of these recordings are now with the Bird Conservation Council of the Malaysian Nature Society, which has accepted them as Plain-pouched Hornbill records (Jeyarajasingam *et al.* in press).

RESULTS

Male: All the birds seen were about the size of Wreathed Hornbill. Like Wreathed Hornbill, the birds had a low corrugated casque, and the tail, which seemed shorter than the body, was entirely white without any tinge of chestnut. The eye-ring was reddish. The crown and rear neck were a rich dark brown, while the sides of the neck and face were contrastingly yellowish. None of the males seen or recorded in the photographs or videos showed any trace of the dark bar on the pouch that is always present on adult Wreathed Hornbill. The pouch was a bright orangish-yellow. Both the upper and lower mandibles were pale yellowish, with a brownish base. There were no corrugations on the base of the lower mandible, which was smooth all the way from the tip to the base. The upperparts and wings were blackish.

Female: Distinctively smaller than the males but otherwise similar except for the all-black head and neck, and the sky-blue pouch contrasting sharply with the black head and neck.

Detached Upper Mandible: A partially charred upper mandible was obtained by our boatman from the local people, the Orang Asli, of the Pos Ciong settlement near

our observation point and directly below the flight path of the hornbills. The casque had seven ridges, suggesting that the bird was several years old, and certainly an adult. The base of the upper mandible lacked corrugations altogether, and taken together with the number of tiers on the casque, this indicates that this bill was from a Plain-pouched Hornbill rather than a continental Wreathed Hornbill. The upper mandible measured from the tip to the base was 173.8 mm long, consistent with it having been an adult male Plain-pouched Hornbill (mean bill length for males 169 mm, range 138-177, n = 10; for females, mean bill length is 137 mm, range 131-143, n = 9; measurements from Kemp 1988).

Vocalizations: A variety of barking calls were made but a three-note flight call was commonly heard. This was a grunting *ehk-ehk-ehk* — with a lilt or accent on the last note.

OBSERVATIONS

Observations were made over 5 consecutive days, starting in the evening of day 1 and ending on the morning of day 5 (Table 1). The counts on the first evening and morning sessions were the lowest of the series, which probably reflects the fact that the birds were already moving before the observers were properly in position on those occasions. Subsequently the observers were in position some 10–15 mins before the birds were first sighted. The hornbills passed our observation post from 07h00 to 09h00 on their feeding flight, and for a shorter duration, from 18h00 to 19h.15 on their roosting flight. The general direction of the flights was from south-west to north-east in the evening, and from north-east to south-west in the morning. Most of the larger groups flew in a distinctive 'V' shape formation. It was noticeable that the birds were very wary, and frequently avoided flying directly overhead, or broke up into smaller groups after apparently sighting the observers. Even after just 5 days, the hornbills seemed sufficiently aware of our presence to pass more distantly from the observation post. The largest count of 2,067 is very similar to reported counts made in Tasek Temengor in 1993. Although those birds were not specifically identified, it seems likely that they too were Plain-pouched Hornbills.

Random birds were examined in the final four counts to determine the ratio of blue-pouched to yellow-pouched birds (Table 1). Immature female Plain-pouched Hornbills resemble adult males in having a yellow pouch (Kemp 1995). Whilst these data do not allow an accurate estimation of the sex ratio in the flocks, they do show that female birds outnumbered males by at least 1.14:1, as the yellow-pouched birds probably included some immature female birds.

DISCUSSION

Very little is known of the Plain-pouched Hornbill in Peninsular Malaysia because of its supposed rarity. According to Robinson and Chasen (1939) it has been recorded in the mangroves on the coast of Selangor and at sea along the coasts of the Straits of Malacca, associating in large flocks and flying over great distances to feed. However, according to Wells (1999) this report was not acceptable. Kemp (1995) stated that the occurrence of the species was 'not well documented owing to earlier confusion with the Wreathed Hornbill *Aceros undulatus*, and that its 'exact habitat requirement is uncertain, but appears to favour tall evergreen forest in broken country'. There is a report of Plain-pouched Hornbill in north Peninsular Malaysia earlier than our report at Kenering, but Kemp (1995) considered that this sighting required confirmation.

Outside of Peninsular Malaysia, the Plain-pouched Hornbill occurs in West and Southwest Thailand and in southern Myanmar (Poonswad and Kemp 1993, Rasmussen, this issue). Recently, the Thailand Hornbill Project staff have identified Plain-pouched Hornbill in roosting assemblages of hornbills just across the Perak border, in the Bang Lang National Park, Tharnto District of Yala Province, where the Plain-pouched Hornbill is the most numerous hornbill in mixed roosts (pers. comm. P. Poonswad). Our view is that all of the hornbills in this flock at Temengor were Plain-pouched Hornbills, given the evidence that we have amassed by way of photogaphs and audio/video recordings.

In terms of size, the Plain-pouched Hornbill is smaller and has longer and narrower wings than Wreathed Hornbill (Kemp 1995), as well as having a more rufous head (Kemp 1988), but since no Wreathed

Table 1. Flight statistics of Plain-pouched Hornbill feeding and roost flights

Day	Flight time	Total number of birds	Largest group	Pouch colour[1]		
				Yellow	Blue	Ratio
1	18.15-19.00	1044	50	-	-	-
2	07.00-09.30	816	37	-	-	-
2	18.00-19.15	1368	29	-	-	-
3	07.00-08.30	1417	37	119	136	1.14
4	07.00-08.45	1851	30	158	172	1.09
4	18.00-19.10	1665	50	96	105	1.09
5	07.00-09.00	2067	43	90	116	1.29

[1] Random sample of 201-330 birds examined during each of the final four counts

were seen together with them, we have not relied on these field marks for identification.

The birds in the present study look superficially like Wreathed Hornbills, with all-white tails and both males and females possessing a low, yellowish casque. However, a careful study of some of the video footage and photographs revealed that the corrugations on the base of the lower mandible of the bill, typical of the Wreathed Hornbill, were absent on both the males and females. The remnant upper mandible obtained at Pos Ciong also showed a lack of these corrugations. Moreover, the pouches of both the males and females lack the black bar typical of the Wreathed Hornbill. Juvenile Wreathed Hornbill, both male and female, looks like the adult male, but there is still a blackish bar across the yellowish pouch. Even a nestling Wreathed Hornbill shows a blackish bar (Frith and Douglas 1978). However, the bar in juvenile Wreathed Hornbill is not as conspicuous as in the adult birds. It could be contended that all of the yellow-pouched birds might have been juvenile Wreathed Hornbills of both sexes, the bars on which may not have been visible at the height the birds were observed. However, this takes no account of adult females, which were obviously not adult female Wreatheds since they lacked any trace of a blackish bar on the pouch.

Dr Pillai Poonswad (pers. comm.) examined the photographic and video images of these hornbills and had no doubts that they were Plain-pouched Hornbills rather than Wreathed Hornbills. The higher casque of the Plain-pouched Hornbill compared to the Wreathed, the absence of corrugations in mature birds, the red basal half to the bill (in males only; as opposed to brownish in male Wreathed), and the absence of corrugations in mature birds could all be discerned from the images. The diagnostic three-note call was evident in the audio recordings. Although the gular bar of the Wreathed may not always be discernible in birds less than two years old, she had no doubts that the other features substantiated the identification of these birds as Plain-pouched Hornbill.

CONSERVATION

There were signs that the hornbills there had been victims of hunting. The scattering of the groups into smaller formations when they passed us revealed that they were wary of humans — especially when those humans were watching and pointing at them with objects such as binoculars. Further evidence that hornbills were hunted in that area was provided by the partly charred bill of a Plain-pouched Hornbill obtained from the Orang Asli at Pos Ciong.

The forest around Tasek Temengor and Kenering is part of a larger tract of forest in Upper Perak with links to the forest in southern Thailand. The hornbills seen at Temengor could have moved into the Thai territories for feeding and then returned into Perak forests along the Perak River as far south as Tasek Kenering for roosting. With the recent surrender of the communist guerillas that had been operating in this region, the pressure to log and develop these forests has mounted.

In 1993-1994, the Malaysian Nature Society mounted the Belum Expedition, to explore the wildlife of the Tasek Temengor area with a base camp at Sungei Halong (Davison 1995). A recommendation was made by the Society for a nature reserve in the area. This remains as a proposal, although the current Mentri Besar has stated that a state park for wildlife will be set up in the area. However, the imminent threat of logging cannot be ruled out completely for the Halong and Pos Ciong areas, as signboards were posted recently 'announcing a pre-felling inventory of 2000 hectares of forest' (MNS 1998). This will certainly affect the future of this massive flock of hornbills moving up and down Tasek Temengor, as well as those sighted at Tasek Kenering. This great gathering of hornbills should be preserved for the people of all nations, now and in the future. For those who have experienced this spectacle, it is indeed one of the great natural wonders of the world.

We would to thank the following for assistance rendered during our hornbill project: See Swee Leng for taking care of the camp as well as keeping his eyes open for the hornbills; Tracy Seah for her counting efforts and statistical recordings; Ong Kiem Sian for her video recording; Jimmy Chew for his photographic recording and Yeo Kim Wah for his assistance in counting. The voice recordings and also some additonal photographing were undertaken by Sutari Supari. We would like also to thank Pilai Poonsward as well as the two unnamed referees for the many helpful comments and polishing of the draft as well as for the general advice generously given. Also, last but not least, we would like to thank Wang Luan Keng for referring and passing to us several research materials that are relevant to the subject at hand. Any errors found herein are our sole responsibility.

REFERENCES

Davison, G. W. H. (1995) The birds of Temengor Forest Reserve, Hulu Perak, Malaysia. *Malayan Nature J.* 48: 371-386.

Davison, G. W. H. (1995) *Belum: A rainforest in Malaysia*. Kuala Lumpur: Malaysian Nature Society.

Frith, C. B. and Douglas, V. E. (1978) Notes on ten Asian hornbill species (Aves: Bucerotidae) with particular reference to growth and behaviour. *Nat. Hist. Bull. Siam Soc.* 27: 35-82.

Ho, H. C. and Sutari, S. (1997) Spectacular movements of hornbills, possibly Plain-pouched Hornbills *Aceros subruficollis*, in Peninsular Malaysia. *Oriental Bird Club Bull.* 25: 59-61.

Jeyarajasingam. A. *et al.* (in press) Plain-pouched Hornbill *Aceros subruficollis* – a new species for Malaysia. *Malayan Nature J.* 54(3).

Kemp, A. (1988) The systematics and zoogeography of Oriental and Australasian Hornbills (Aves: Bucerotidae). *Bonner Zool. Beitrage* 39: 343-45.

Kemp, A. (1995) *The hornbills*. Oxford: Oxford University Press.

MNS Conservation Unit (1998) Logging in Temenggor Forest Reserve. *Malayan Nat.* 52: 6-7.

Poonswad, P. and Kemp, A. C. (ed.) (1993) *Manual to the conservation of Asian hornbills*. Bangkok: Project Hornbill, Thailand.

Rasmussen, P. C. (2000) A review of the taxonomy and status of the Plain-pouched Hornbill *Aceros subruficollis*. *Forktail* 16.

Robinson, H. C. and Chasen, F. N. (1939) *The birds of the Malay Peninsula*, 4. London: Witherby.

Wells, D. R. (1999) *The birds of the Thai-Malay Peninsula*. Vol. 1. Non-passerinces. London: Academic Press.

Yaacob, M. N. (1994) Nature notes: record for Wreathed Hornbills *Rhyticeros undulatus* in the Temenggor dam area. *Malayan Nat.* 48: 12-14.

Ho Hua Chew and Sutari Supari, c/o 11 Marigold Drive, Singapore 576412